

**GE Betz**

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Material Safety Data Sheet

Issue Date: 19-MAY-2004

EMERGENCY TELEPHONE (Health/Accident): (800) 877-1940

1 PRODUCT IDENTIFICATION

PRODUCT NAME:

CONTINUUM AEC213

PRODUCT APPLICATION AREA:

WATER-BASED CORROSION INHIBITOR/DEPOSIT CONTROL AGENT.

2 COMPOSITION / INFORMATION ON INGREDIENTS

Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this MSDS for our assessment of the potential hazards of this formulation.

HAZARDOUS INGREDIENTS:

| CAS# | CHEMICAL NAME |
|-----------|--|
| 1310-73-2 | SODIUM HYDROXIDE (CAUSTIC SODA) Corrosive; toxic (by ingestion) |
| 64-02-8 | ETHYLENEDIAMINE TETRAACETIC ACID, TETRASODIUM SALT (EDTA.4NA) Corrosive (eyes); irritant (skin) |
| 7631-95-0 | SODIUM MOLYBDATE (MOLYBDIC ACID, DISODIUM SALT) Potential irritant (respiratory); potential lung toxicity |

No component is considered to be a carcinogen by the National Toxicology Program, the International Agency for Research on Cancer, or the Occupational Safety and Health Administration at OSHA thresholds for carcinogens.

3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION

May cause slight irritation to the skin. Severe irritant to the eyes. Mists/aerosols may cause irritation to upper respiratory tract.

DOT hazard is not applicable
Emergency Response Guide is not applicable
Odor: Mild; Appearance: Amber To Brown, Liquid

Fire fighters should wear positive pressure self-contained breathing apparatus (full face-piece type). Proper fire-extinguishing media: dry chemical, carbon dioxide, foam or water

POTENTIAL HEALTH EFFECTS**ACUTE SKIN EFFECTS:**

Primary route of exposure; May cause slight irritation to the skin.

ACUTE EYE EFFECTS:

Severe irritant to the eyes.

ACUTE RESPIRATORY EFFECTS:

Mists/aerosols may cause irritation to upper respiratory tract.

INGESTION EFFECTS:

May cause gastrointestinal irritation.

TARGET ORGANS:

Prolonged or repeated exposures may cause toxicity to the lung.

MEDICAL CONDITIONS AGGRAVATED:

Not known.

SYMPTOMS OF EXPOSURE:

May cause redness or itching of skin.

4 FIRST AID MEASURES**SKIN CONTACT:**

Wash thoroughly with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

EYE CONTACT:

Remove contact lenses. Hold eyelids apart. Immediately flush eyes with plenty of low-pressure water for at least 15 minutes. Get immediate medical attention.

INHALATION:

If nasal, throat or lung irritation develops - remove to fresh air and get medical attention.

INGESTION:

Do not feed anything by mouth to an unconscious or convulsive victim. Do not induce vomiting. Immediately contact physician. Dilute contents of stomach using 3-4 glasses milk or water.

NOTES TO PHYSICIANS:

No special instructions

5 FIRE FIGHTING MEASURES

FIRE FIGHTING INSTRUCTIONS:

Fire fighters should wear positive pressure self-contained breathing apparatus (full face-piece type).

EXTINGUISHING MEDIA:

dry chemical, carbon dioxide, foam or water

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition (destructive fires) yields elemental oxides.

FLASH POINT:

> 200F > 93C P-M(CC)

6 ACCIDENTAL RELEASE MEASURES

PROTECTION AND SPILL CONTAINMENT:

Ventilate area. Use specified protective equipment. Contain and absorb on absorbent material. Place in waste disposal container. Flush area with water. Wet area may be slippery. Spread sand/grit.

DISPOSAL INSTRUCTIONS:

Water contaminated with this product may be sent to a sanitary sewer treatment facility, in accordance with any local agreement, a permitted waste treatment facility or discharged under a permit. Product as is - Incinerate or land dispose in an approved landfill.

7 HANDLING & STORAGE

HANDLING:

Alkaline. Do not mix with acidic material.

STORAGE:

Keep containers closed when not in use. Do not freeze. If frozen, thaw and mix completely prior to use.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS**CHEMICAL NAME**

SODIUM HYDROXIDE (CAUSTIC SODA)

PEL (OSHA): 2 MG/M3

TLV (ACGIH): 2 MG/M3 (CEILING)

ETHYLENEDIAMINE TETRAACETIC ACID, TETRASODIUM SALT (EDTA.4NA)

PEL (OSHA): NOT DETERMINED

TLV (ACGIH): NOT DETERMINED

SODIUM MOLYBDATE (MOLYBDIC ACID, DISODIUM SALT)

PEL (OSHA): 5 MG/M3 (AS Mo)

TLV (ACGIH): 0.5 MG/M3 (AS Mo) RESPIRABLE FRACTION

ENGINEERING CONTROLS:

Adequate ventilation to maintain air contaminants below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT:

Use protective equipment in accordance with 29CFR 1910 Subpart I

RESPIRATORY PROTECTION:

A RESPIRATORY PROTECTION PROGRAM THAT MEETS OSHA'S 29 CFR 1910.134 AND ANSI Z88.2 REQUIREMENTS MUST BE FOLLOWED WHENEVER WORKPLACE CONDITIONS WARRANT A RESPIRATOR'S USE.

USE AIR PURIFYING RESPIRATORS WITHIN USE LIMITATIONS ASSOCIATED WITH THE EQUIPMENT OR ELSE USE SUPPLIED AIR-RESPIRATORS.

If air-purifying respirator use is appropriate, use a respirator with dust/mist filters.

SKIN PROTECTION:

neoprene gloves-- Wash off after each use. Replace as necessary.

EYE PROTECTION:

splash proof chemical goggles

9 PHYSICAL & CHEMICAL PROPERTIES

| | | | |
|---------------------------|-------|-----------------------|--------|
| Specific Grav. (70F, 21C) | 1.281 | Vapor Pressure (mmHG) | ~ 18.0 |
| Freeze Point (F) | 10 | Vapor Density (air=1) | < 1.00 |
| Freeze Point (C) | -12 | | |
| Viscosity (cps 70F, 21C) | 34 | % Solubility (water) | 100.0 |

| | |
|----------------------------|----------------------|
| Odor | Mild |
| Appearance | Amber To Brown |
| Physical State | Liquid |
| Flash Point | P-M(CC) > 200F > 93C |
| pH As Is (approx.) | > 13.0 |
| Evaporation Rate (Ether=1) | < 1.00 |

NA = not applicable ND = not determined

10 STABILITY & REACTIVITY

STABILITY:

Stable under normal storage conditions.

HAZARDOUS POLYMERIZATION:

Will not occur.

INCOMPATIBILITIES:

May react with strong oxidizers.

DECOMPOSITION PRODUCTS:

Thermal decomposition (destructive fires) yields elemental oxides.

INTERNAL PUMPOUT/CLEANOUT CATEGORIES:

"B"

11 TOXICOLOGICAL INFORMATION

| | |
|------------------------|--------------|
| Oral LD50 RAT: | >2,000 mg/kg |
| NOTE - Estimated value | |
| Dermal LD50 RABBIT: | >2,000 mg/kg |
| NOTE - Estimated value | |

12 ECOLOGICAL INFORMATION

AQUATIC TOXICOLOGY

Daphnia magna 48 Hour Static Renewal Bioassay (pH adjusted)
LC50= 1410; No Effect Level= 1000 mg/L
Fathead Minnow 96 Hour Static Renewal Bioassay (pH adjusted)
LC50= 375; No Effect Level= 250 mg/L
Rainbow Trout 96 Hour Static Renewal Bioassay (pH adjusted)
LC50= 233; No Effect Level= 62.5 mg/L

BIODEGRADATION

BOD-28 (mg/g): 15
BOD-5 (mg/g): 7
COD (mg/g): 228

TOC (mg/g): 85

13 DISPOSAL CONSIDERATIONS

If this undiluted product is discarded as a waste, the US RCRA hazardous waste identification number is :
D002=Corrosive (pH) .

Please be advised; however, that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

14 TRANSPORT INFORMATION

DOT HAZARD: Not Applicable
UN / NA NUMBER: Not applicable
DOT EMERGENCY RESPONSE GUIDE #: Not applicable

15 REGULATORY INFORMATION

TSCA:

All components of this product are listed in the TSCA inventory.

CERCLA AND/OR SARA REPORTABLE QUANTITY (RQ):

1,710 gallons due to SODIUM HYDROXIDE (CAUSTIC SODA);

USDA FEDERALLY INSPECTED MEAT AND POULTRY PLANTS:

This product is composed of ingredients previously approved by USDA to meet G5 and G7 classification and may be used in water for cooking/cooling or in boiler or cooling systems with no food contact.

SARA SECTION 312 HAZARD CLASS:

Immediate (acute); Delayed (Chronic)

SARA SECTION 302 CHEMICALS:

No regulated constituent present at OSHA thresholds

SARA SECTION 313 CHEMICALS:

No regulated constituent present at OSHA thresholds

CALIFORNIA REGULATORY INFORMATION

CALIFORNIA SAFE DRINKING WATER AND TOXIC

ENFORCEMENT ACT (PROPOSITION 65) CHEMICALS PRESENT:

This product contains these chemicals known to the state of California to cause cancer and/or reproductive toxicity:

| | |
|-----------|---|
| CAS# | CHEMICAL NAME |
| 5064-31-3 | NITRILOTRIACETIC ACID, TRISODIUM SALT (NTA.3NA) |
| 50-00-0 | FORMALDEHYDE |

MICHIGAN REGULATORY INFORMATION

No regulated constituent present at OSHA thresholds

16 OTHER INFORMATION

NFPA/HMIS

CODE TRANSLATION

| | | |
|------------|---|----------------|
| Health | 1 | Slight Hazard |
| Fire | 1 | Slight Hazard |
| Reactivity | 0 | Minimal Hazard |

Special
(1) Protective Equipment ALK pH above 12.0
 B Goggles,Gloves

(1) refer to section 8 of MSDS for additional protective equipment recommendations.

CHANGE LOG

| | EFFECTIVE DATE | REVISIONS TO SECTION: | SUPERCEDES |
|--------------|-------------------|-----------------------|-------------|
| | ----- | ----- | ----- |
| MSDS status: | 23-DEC-1997 | | ** NEW ** |
| | 25-FEB-1998 | 2, 8, 15; EDIT: 9 | 23-DEC-1997 |
| | 12-MAR-1998 | 15; EDIT: 9 | 25-FEB-1998 |
| | 26-MAR-1998 | 12 | 12-MAR-1998 |
| | 05-OCT-1998 | 15 | 26-MAR-1998 |
| | 10-DEC-1998 | 15 | 05-OCT-1998 |
| | 03-FEB-2000 | 2, 4, 8 | 10-DEC-1998 |
| | 02-JUN-2000 | 12 | 03-FEB-2000 |
| | 15-JAN-2002 | 3 | 02-JUN-2000 |
| | 24-JAN-2003 | 15 | 15-JAN-2002 |
| | 01-APR-2004 | 15 | 24-JAN-2003 |
| | 19-MAY-2004 | 3 | 01-APR-2004 |